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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/674,472 | 10/01/2003 | Yasuhiro Nakai | 2018-784 | 5507 |

23117 7590 12/09/2005

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EXAMINER

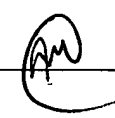
COLON SANTANA, EDUARDO

ART UNIT PAPER NUMBER

2837

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|--|---|--|---|
| <p align="center">Office Action Summary</p> | <p>Application No.</p> <p align="center">10/674,472</p> | <p>Applicant(s)</p> <p align="center">NAKAI ET AL.</p> | |
| | <p>Examiner</p> <p align="center">Eduardo Colon Santana</p> | <p>Art Unit</p> <p align="center">2837</p> |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

1. Applicant's amendments filed on 8/11/2005 have been received and entered in the case.
2. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bradford et al. U.S. Patent No. 4,678,401.

Referring to claim 1, Bradford et al. discloses a rotor control system (see figures 1 and 2 and respective portions of the specification). Bradford further depicts from figure 1, a rotor (14); a resolver (35') for producing a pulse signal in accordance with the rotation of the rotor shaft (14') that rotates a control object (helicopter blades). Bradford et al. in addition describes a control means (deceleration controller 23, rotor brake system 31 and stop azimuth controller 32), which rotates the rotor to a target position by detecting a rotation position of the rotor by means of the resolver (35). Furthermore, Bradford et al. describes that in a period when deceleration control is performed (23, 31) a correction indication is establish (AZMOD 38) based on the phase lead of the current supply

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phase to the rotor in accordance with a rotation speed (velocity 28) (see Abstract and Col. 6, lines 16-67).

As to claims 2 and 3, Bradford et al. describes that the control means (deceleration controller 23, rotor brake system 31 and stop azimuth controller 32), corrects (AZMOD 38) the target position of the rotor when deceleration control is performed in such a way that braking force from the rotor brake system is lowered when the "POSERR signal 55") is adjusted (see Col. 6, lines 23-47). Additionally, Bradford et al. takes into consideration a rotation angle of the rotor in the means for providing a correction factor (AZMOD 38) (see Col. 3, lines 41-50).

Referring to claim 5, Bradford et al. discloses a motor/gear assembly (14") to rotate the rotor 14. Even though Bradford does not explicitly describes a switch reluctance machine, it is well-known in the art that when operated as a motor, the stator phases are sequentially switched on and off to pull the rotor into alignment with them, this requires the rotor position to properly excite the stator phases.

As to claim 6, Bradford et al. mentions the use of a transmission (16), having a gear train for driving a position of a control object. Although Bradford et al. does not mention a gear shift, it is implied in the gear train apparatus (14").

Allowable Subject Matter

4. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form

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including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record in form 892 and not specifically relied upon is considered pertinent to applicant's disclosure to further show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Colon Santana whose telephone number is (571) 272-2060. The examiner can normally be reached on Monday thru Thursday 6:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Martin can be reached on (571) 272-2800 X.37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center at 866-217-9197.

ECS
November 11, 2005


MARLON T. FLETCHER
PRIMARY EXAMINER